

CLAIMS

What is claimed is:

1. A concrete drill for a rotary and percussively driven hand tool machine comprising a cutting part (1) and a striking part (2) axially limited displaceable relative to the cutting part (1), the cutting part (1) and the striking part (2) each have at their facial surfaces work zones for working a bore hole surface (7), wherein the respective facial surface work zones of the cutting part (1) and the striking part (2) radially overlap upon rotation of the concrete drill.
2. The concrete drill of claim 1, wherein the respective facial surface work zones of the cutting part (1) and the striking part (2) overlap from a small central zone up to an entire bore hole radius upon rotation of the concrete drill.
3. The concrete drill of claim 1, wherein, in an axial intermediate position of the striking part (2), the cutting part (1) and the striking part (2) upon rotation of the concrete drill form a common mantle head surface (6) at a head-end leading end of the striking part (2) and the cutting part (1).
4. The concrete drill of claim 3, wherein two striking segments (2a, 2b) and at least two cutting segments (1a, 1b) are nested in each other in a transverse plane, at least at the head end leading end of the striking part (2) and the cutting part (1).
5. The concrete drill of claim 4, wherein peripherally adjacent striking segments (2a, 2b) and cutting segments (1a, 1b) form common, axially running intermediate segment surfaces (3).

6. The concrete drill of claim 4, wherein the at least two striking segments (2a, 2b) are connected with each other at the head-end leading end of the striking part (2).
7. The concrete drill of claim 6, wherein two diametrically opposed striking segments (2a, 2b) connected to each other are nested in two diametrically opposed unconnected cutting segments (1a, 1b) at the head-end leading end.
8. The concrete drill of claim 7, wherein one of cutting edges of the cutting part (1) and the cutting segment (1a, 1b) has a cutting radius of less than 1/20 of the bore diameter.
9. The concrete drill of claim 6, wherein the cutting edges are made of hard material insets (4).
10. The concrete drill of claim 1, wherein a drill shaft (8) is connected non-rotationally with the cutting part (1) and an axially limited guidable ram (9), in the drill shaft (8) is separately associated with the striking part (2).
11. The concrete drill of claim 1, wherein the striking part (2) is made of a very wear-resistant material.
12. The concrete drill of claim 1, wherein the cutting part (1) at one insertion end (10) is mounted axially limited displaceable for reception in a hand tool machine.
13. The concrete drill of claim 12, wherein the cutting part (1) is spring-biased by a spring means (14) that is axially biased against the insertion end (10).
14. The concrete drill of claim 6, wherein the head-end leading end has a space (5) at least in a

transverse plane that is configured segmental with a large surface area.

15. The concrete drill of claim 10, wherein the drill shaft (8) is configured as a hollow cylinder.
16. The concrete drill of claim 8, wherein one of cutting edges of the cutting part (1) and the cutting segment (1a, 1b) has a rake angle between -10° to $+10^{\circ}$.
17. The concrete drill of claim 9, wherein the hard material insets (4) have layers made of polycrystalline diamond (PCD).